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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,249	03/17/2004	Ralf Mauritz	21718 US-as	5270

67491 7590 08/19/2010

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EXAMINER	
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ART UNIT	PAPER NUMBER
1639	

MAIL DATE	DELIVERY MODE
08/19/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Continued

The amendment filed August 4, 2010 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance and will not be entered because of the following:

a. The proposed amendment requires further consideration and/or search (e.g. the new limitation of "detecting any of the detectable protecting groups" of claim 1, which changes the scope of claim 1 since it is no longer open to mean any detecting group remaining, rather than just the side chain protecting groups).

b. The proposed amendment may necessitate the modification of outstanding rejection(s) to address the new limitation (e.g. the new limitation of "detecting any of the detectable protecting groups" of claim 1).

c. The proposed amendment may necessitate the raising of new prior art rejections (e.g. the new limitation of "detecting any of the detectable protecting groups" of claim 1).

d. The proposed amendment may necessitate the raising of new 112 issues (e.g. the new limitation of "detecting any of the detectable protecting groups" of claim 1).

e. There is no convincing evidence under 37 CFR 1.116(b) why the proposed amendment was not earlier presented.

f. For all the reasons above, the amendment does not place the application in better condition for allowance and/or appeal.

Response to Arguments

Applicants argue the various references individually (Remarks, p 6+).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Firstly, it is noted that the present claims are rejected as being obvious over the combination of McGall et al., Wagner et al., Agris et al, Chen et al., and Hobbs et al. Applicants arguments regarding whether McGall et al. teaches detecting deprotection of the side chains is irrelevant in view of the combination of references.

Applicants assert that McGall et al. only teach testing selected arrays for deprotection (Response, pp 6-7).

It is noted that this argument is irrelevant to the instant claimed method. The instant claimed method only requires testing a single array. In addition, the knowledge of methods of testing select arrays necessarily obviates methods of testing every array.

Applicants assert that McGall et al. teach that the tested arrays are consumed or otherwise destroyed in the process (Response, pp 6-7).

The examiner can find no teaching or suggestion anywhere in McGall et al. that the tested arrays are consumed or otherwise destroyed. It is unclear how the arrays could be consumed or destroyed in McGall et al. but not in the present invention if McGall et al. is using the same detecting groups, e.g. rhodamine, as the present claims. It is further noted that applicants arguments are directed to what the user does with the chip after testing rather than what the testing procedure itself does to the array. The instant claims are drawn to a method of testing, not

the use of the array after testing. In addition, the arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). See MPEP § 2145 I.

Applicants assert Wagner et al. teach dnseoc protecting the 5-OH group and would not function in accordance with the instant claimed methods (Remarks, p 8).

Firstly, it is noted that applicants specifically claim (in claim 3) a dansyl group as a detectable protecting group in the instant claimed invention. Therefor it is unclear how dnseoc, a dansyl, could not function in the instant claimed invention.

Secondly, applicants have grossly mischaracterized the teachings of Wagner et al. Wagner et al. clearly teach the dnseoc group protects the amino functional group (as previously stated; applicants are respectfully directed to schemes 1-4 which clearly depict dnseoc attached to the amino group, in addition to p 201, para 3, which specifically teaches that the dnseoc is "introduced into the amino functions," where the amino function is the amino functional group). Wagner et al. only mention dnseoc as a protecting group for the hydroxy group in the introduction in discussing that it had previously been used for that function (see p 200, middle of para 1). In addition, Wagner et al. also clearly teach utilizing different protecting groups (i.e.: not dansyl/dnseoc) for protecting the hydroxyl groups which necessarily have to be deprotected after each step in order to add another building block (see p 204, last para, where Wagner et al. teach deprotecting the hydroxyl groups, which are protected with dimethoxytrityl, with a different buffer than DBU). Wagner et al. do not teach deprotecting the amino groups after each step. Wagner et al. rather teach deprotecting the dnseoc-protected amino groups after completion of

synthesis (see p 205, where Wagner et al. state "After the last synthesis cycle, the support was treated with 1M DBU in MeCN to remove all protecting groups."). Wagner et al. also state, on p 200, that DBU selectively cleaves dnseoc groups while the oligos are still attached to the support.

Therefor, applicants arguments that the deprotecting steps applied in McGall et al. would also deprotect the side chains are moot. Clearly McGall et al. are utilizing a different protecting group to protect the hydroxy group, and one of skill in the art would not utilize the same protecting group for the hydroxy group and amino side chains for this reason. All the cited references teach protection of the side chains until synthesis is complete.

In addition, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicants argue that the combination of McGall et al. and Wagner et al. "clearly" results in cleavage of all protected groups at the end of each unit addition step (Remarks, p 9).

Contrary to applicants statement, the combination of McGall et al., Wagber et al., and Agris et al. (which is the combination of references the instant invention is rejected under) clearly do not result in cleavage of all protecting groups. All the cited references teach leaving the amino protecting groups intact until completion of synthesis. As discussed supra, Wagner et

al. do not in fact teach protecting the 5-OH group with dnseoc and instead teach protecting the amino group, and further teach cleaving the dnseoc protecting groups only after synthesis is complete.

In addition, it is noted that the act of repeating steps, such as repeating deprotection of the amino groups after the completion of synthesis does patentably distinguish from known methods. Here, the step of detection followed by deprotection is merely being repeated multiple times. The combination of McGall et al., Wagner et al., Agris et al., Chen et al., and Hobbs et al. teach cleaving the detectable side chain protecting groups followed by detection of any remaining side chain protecting groups. In addition, McGall et al. teach multiple rounds of deprotecting the 5-OH group. It would have been obvious to repeat the step of detecting any remaining protecting groups followed by a step of cleaving any remaining detectable protecting groups. Here, step (d) (the step of repeating) is merely a repeat of steps (b) (cleaving the detectable protecting groups) and (c) (detecting any detectable protection groups remaining) until there are no remaining detectable protecting groups. Steps (b) and (c) are known procedures. To achieve the cleavage of every detectable protecting group, there are few other options than to repeat steps (b) and (c). See *Perfect Web V. Info USA, 587 F.3d 1324, 42 USPQ2d 1849* (Fed. Cir. 2010). Analysis of obviousness…may include recourse to logic, judgment, and common sense available to the person of ordinary skill that do not necessarily require explication in any reference or expert opinion.

Since McGall et al. teach detecting remaining protecting groups, Agris et al. teach detecting remaining side chain protecting groups, and Wagner et al. teach detectable amino side chain protecting groups that can be cleaved, it would have been obvious to arrive at the presently claimed method of utilizing the detectable amino side chain groups of Wagner et al. in the method of detecting the amount of deprotection as taught by McGall et al. and to detect remaining amino side chain protecting groups as taught by Agris et al.

As stated supra, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Future Communications

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANNON JANSSEN whose telephone number is (571)270-1303. The examiner can normally be reached on Monday-Friday 10:00AM-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (571) 272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amber D. Steele/
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